

Claims

1. The method of producing continuous inorganic fibers of rock, comprising operations of loading fractured rocks to melting furnace, rocks melting, melt homogenization, further stabilization of melt in melting furnace feeder, fiber drawing, lubricating and winding onto a bobbin, wherein dacite or rhyodacite is used as a rock, prior to loading to the melting furnace the rock is heated up to temperature between 700 and 910°C, kept at this temperature during 5 to 15 minutes until removal of chemically bound water and burning up organic components, then the rock is subjected to mechanical-catalytical activation until obtaining particles of not more than 15 μm in size and is heated to temperature between 2105 and 2200°C until obtaining the melt with amorphism degree of not less than 96% and isolation of not melted quartzites from the melt, further homogenization and stabilization of the melt are performed at the temperature 1420 to 1710°C until obtaining the melt with viscosity being not less than 130 decipoise, and fibers are drawn from the melt zone located below the surface layer.

2. The method of producing continuous inorganic fibers of rock, comprising operations of loading fractured rocks to melting furnace, rocks melting, melt homogenization, further stabilization of melt in melting furnace feeder, fiber drawing, lubricating and winding onto a bobbin, wherein granite or rhyolite is used as a rock, prior to loading to the melting furnace the rock is heated up to temperature between 750 and 950°C and kept at this temperature during 20 to 30 minutes until fracturing of conglomerates and removal of water vapors, then the rock is subjected to mechanical-catalytical activation until obtaining particles of not more than 10 μm in size and is heated to temperature between

2110 and 2500°C until obtaining the amorphous melt, further homogenization and stabilization of the melt are performed at the temperature 1500 to 1750°C until obtaining the melt with viscosity being not less than 145 decipoise, and fibers are drawn from the melt zone located below the surface layer.

3. The method of producing continuous inorganic fibers of rock, comprising operations of loading fractured rocks to melting furnace, rocks melting, melt homogenization, further stabilization of melt in melting furnace feeder, fiber drawing, lubricating and winding onto a bobbin, wherein sand predominated rock with silicon oxide content equal or exceeding 73% is used as a rock, prior to loading to the melting furnace the sand is heated up to temperature between 100 and 450°C and kept at this temperature during 30 to 60 minutes until removal of bound water and gaseous inclusions, heated raw material is subjected to mechanical-catalytical activation until obtaining particles of not more than 5 μm in size, then the raw material is heated up to temperature between 2115 and 2550°C and kept at this temperature until obtaining the amorphous melt, homogenization and stabilization of the melt are performed at the temperature 1440 to 1730°C until obtaining the melt with viscosity not less than 160 decipoise, and fibers are drawn from the melt zone located below the surface layer.

4. The production line for implementing the method according to claim 1, 2 or 3, comprising rock dosing unit, melting furnace, feeder equipped with the spinneret and the feeder for outputting the continuous fiber, mechanisms for applying a lubricant, winding the fiber onto bobbin, preservation and storing of the fibers obtained, and means for technological process monitoring and control, wherein the production line further comprises the arrangement for mechanical-catalytical processing of the raw material, heat exchanger

installed on the dosing unit for rock preliminary heating, blending chamber, which comprises the case, bottom, adjustable valves on the input and output sides, intended for melt homogenization and stabilization, spinneret heater, while the input of the arrangement for mechanical-catalytical treatment of the raw material is connected with the output of the rock dosing unit, and the output of the arrangement is connected with the melting furnace input, melting furnace output is connected with the blending chamber input, the output of the blending chamber is connected with the feeder equipped with heated spinneret.